

REMARKS

Prior to the filing of this response, claims 37-39, 41-46, 48, 50-54, and 63-66 were pending in the application.

In this response, claim 37 is amended to specify that, in one embodiment, the process consists essentially of the steps of applying a primer composition and a top coat composition to a compressible fiber mat, which is then heated and pressed to form a polymer coated composite substrate. Claim 44 is amended to specify that, in another embodiment, the process consists essentially of forming a laminate including a primer composition and a top coat composition, applying the laminate to a compressible fiber mat, and heating and pressing to form a polymer coated composite substrate.

Claim 53 is cancelled.

Claims 63-66 are cancelled as drawn to a non-elected invention. Applicants reserve the right to file at a later date a divisional application directed to the subject matter of these claims.

In view of the above amendments and the following remarks, Applicants respectfully request further examination of the application and reconsideration of the rejections set forth in the Office Action dated April 10, 2006.

I. Election/Restrictions

On page 2 of the Office Action, it is contended that under 35 U.S.C. § 121 claims 63-66 are directed to a separate species that is distinct from the species currently undergoing examination on the merits. Accordingly, claims 63-66 are withdrawn as directed to a non-elected invention.

In response, claims 63-66 are cancelled, and Applicants reserve the right to present claims 63-66 in a divisional application at a later date.

II. Claim Rejection Under 35 U.S.C. § 112

On pages 2-3 of the Office Action, the Examiner rejected claim 53 under 35 U.S.C. § 112, second paragraph, as indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The Examiner is correct in interpreting the phrase “a top coat composition over the matrix” of claim 53 is the same top coat applied to the primer coating layer of claim 44. Since claim 53 is deemed redundant in light of the recent amendment, it is hereby cancelled. Accordingly, Applicants respectfully request withdrawal of the rejection under the second paragraph of 35 U.S.C. § 112.

III. Claim Rejection Under 35 U.S.C. § 102

On pages 3-4 of the Office Action, claims 37-39, 42, 44-46, 49-50 and 53-54 are rejected under 35 U.S.C. 102(b) as anticipated by van der Hoeven (U.S. Patent No. 4,789,604). As grounds for this anticipation rejection, it is contended that van der Hoeven teaches processing steps which include forming a crosslinkable polymer on fiber mat, crosslinking it room temperature, applying a top coat; and compressing and heating the crosslinked coating to form the polymer coated substrate. Applicants respectfully traverse the rejection for the reasons that follow.

The van der Hoeven reference is directed to a decorative panel including a core layer 13 having applied on opposing surfaces thereof a decorative layer 14 (Fig. 1). The decorative layer 14 may include a substrate layer 1, as well as additional layers 2 and 6 (Figs. 1 and 3). The additional layers 2 and 6 in the decorative layer 14 are made of synthetic resins that are polymerizable by radiation.¹ As shown in Figs. 1-3, once the liquid synthetic resins 2 and 6 are applied to the substrate 1, they are crosslinked by radiation in the chamber 4. Liquid resin layer 3 may also be applied on top of layers 2 or 6, crosslinked in the chamber 4, and subsequently removed to modify the gloss and/or surface texture of the underlying layers.² Once the crosslinking is complete, the substrate 1 overlain by layers 2, 6 may be applied on opposed surfaces of the core layer 13. The construction is then heated under pressure to form the final decorative panel.³

In contrast, claim 37 as amended is directed to an embodiment of a process that consists essentially of applying a chemically crosslinkable primer coat composition on a surface of a compressible fiber mat. The chemically crosslinkable primer coat composition is selected such

¹ See, e.g., Van der Hoeven, col. 9, lines 20-38.

² *Id.*, Figs. 1-3, col. 7.

³ *Id.*, see Examples.

that a crosslinked polymer matrix is formed when or as the composition is applied to the mat. A top coat composition is then applied on top of the primer coat composition, and the construction is heated and pressed to form a polymer coated composite substrate. No additional crosslinking by radiation is required prior to heating and pressing to form the final product.

Similarly, claim 44 as amended is directed to another embodiment of the process that consists essentially forming a laminate including the chemically crosslinkable primer composition and the top coat composition, applying this laminate construction to the fiber mat, and heating under pressure to form the final polymer coated substrate product. Again, no additional crosslinking steps are required prior to heating and pressing to form the final product.

The present invention is based in part on the finding that careful selection of the materials for the primer composition can avoid the additional crosslinking steps required in the process described in the van der Hoeven reference, which reduces process time and costs. Since the primer composition forms a crosslinked matrix as it is applied to the mat or formed as a laminate, the top coat composition may be applied over the still wet primer coat, which reduces handling steps. In addition, unlike the van der Hoeven process, in which the primer coat and the top coat are formed and crosslinked separately prior to their application to the fiber core, in the present process the primer and top coat may be applied directly on the core layer and heated and compressed, which further reduces process time and costs.

The present specification makes clear that the primer coat composition is selected to form a crosslinked matrix when or as it is applied to the fiber mat. This means that additional crosslinking steps, such as the e-beam treatment in van der Hoeven, are not required prior to the heating and compressing step used to form the final product. Therefore, in this context the term consisting essentially means that additional crosslinking steps prior to heating and compressing would alter the basic and novel characteristics of the process.

Since van de Hoeven fails to teach each and every limitation set forth in claims 37 and 44 amended, Applicants respectfully submit that the subject matter of claims 37-39, 42, 44-46, 49-50 and 53-54 is not anticipated under 35 U.S.C. § 102 by the applied reference. Reconsideration and withdrawal of this rejection are respectfully requested.

IV. Claim Rejection Under 35 U.S.C. § 103

On pages 4-5 of the Office Action, paragraph 8, claims 37-39, 41-46, 48 and 50-54 are rejected under 35 U.S.C. § 103(a) as obvious over van der Hoeven in view of Helmer et al. (WO 96/22338). As grounds for this obviousness rejection, it is contended that it would have been obvious to one of ordinary skill in the art to have used the polymers in Helmer et al. in place of those of van der Hoeven in order to achieve faster curing. The stated rationale for this proposed modification is to provide a decorative crosslinkable acrylate polymer having the advantage of hardening quickly. Applicants respectfully traverse the rejection for the reasons that follow.

First, as noted above, van der Hoeven fails to teach or suggest that his primer coat composition 2 can be chemically crosslinked, and the applied reference repeatedly states that any materials selected must be curable with radiation. This reference would provide one of ordinary skill with no motivation to select a chemically crosslinkable primer coating composition as presently claimed, and, in view of the teachings of van der Hoeven, there is no expectation that this proposed modification would be successful.

Second, the van der Hoeven reference is directed to a decorative panel that includes a core substrate layer with multiple decorative layers of acrylate polymers. The acrylate polymers in van der Hoeven impart surface gloss.⁴ Therefore, to replace the acrylate polymer in van der Hoeven with an alternative polymer, a skilled artisan would look to polymeric materials that would provide some gloss characteristics.

In contrast, the Helmer et al. reference is directed to a fast drying polymeric composition for traffic marking.⁵ The polymeric composition in Helmer et al. forms a hard, smear resistant surface and has the appearance, feel, and non-tracking characteristic of dry paint.⁶ Following review of the teachings of van der Hoeven, assuming *arguendo* that one of ordinary skill in the art would even consider polymeric materials that are not polymerizeable with radiation, Applicants respectfully submit that the non-glossy dry paints in Helmer would not be selected.

To support an obviousness rejection under 35 U.S.C. § 103(a), the Examiner must show some objective teaching in the prior art or that knowledge generally available to one of ordinary

⁴ van der Hoeven, col. 2, lines 11-14

⁵ Helmer et al., page 1, lines 5-8

⁶ *Id.* at lines 26-29.

skill in the art would lead that individual to combine the relevant teachings of the references.⁷ In the present case, the Examiner has cited no objective teachings in the van der Hoeven and Helmer et al. references, whether considered alone or in combination, that would lead a skilled artisan to replace the polymeric composition in van der Hoeven with the polymeric composition in Helmer et al. In fact, the cited references teach away from the proposed modification, which is stated therein to result in an appearance, feel, and non-tracking characteristics of dry paint. Applicants respectfully submit that the present obviousness rejection is based on hindsight following review of the present disclosure, and is improper.

For the reasons set forth above, Applicants respectfully submit that the subject matter of claims 37-39, 41-46, 48 and 50-54 is not *prima facie* obvious under 35 U.S.C. § 103(a) over van der Hoeven in view of Helmer et al. Reconsideration and withdrawal of the cited rejection are respectfully requested.

V. Rejection for Obviousness-type Double Patenting:

On page 5 of the Office Action, paragraph 9, claims 37-39, 41-46, 48 and 50-54 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-38 of U.S. Patent No. 6,165,308.

A Terminal Disclaimer accompanies this Amendment. The disclaimer is made to expedite issuance and is not intended as an admission that any claim of the present application is the same or an obvious variant of those of U.S. Patent No. 6,165,308. This disclaimer obviates the double patenting rejection and places claims 37-39, 41-46, 48 and 50-54 in condition for allowance.

⁷ See, e.g. *In re Thrift*, 63 USPQ2d 2002, 2006 (Fed. Cir. 2002), citing *In re Fine*, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988).

CONCLUSION

All claims in this application are in condition for allowance. Applicant respectfully requests reconsideration and prompt allowance of all pending claims.

Please charge any additional fees or credit any overpayment to deposit account number 50-1778.

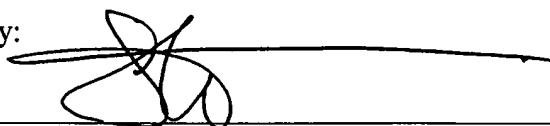
If questions remain regarding the above, or if the Examiner wishes to discuss any aspect of this application, please contact the undersigned.

Date:

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